
2.0 Regulation Governing Individual Onsite Wastewater Disposal

Mississippi State Department of Health
Post Office Box 1700
Jackson, Mississippi 39215-1700
XXXXXXXXXX
Form No. 309

Listing of Design Standards

Design Standard I	I-A Septic Tanks I-B Aerobic Treatment Units
Design Standard II	Aggregate Disposal Systems
Design Standard III	Aggregate Replacement Disposal Systems Large Diameter Aggregate Replacement Systems III-A Multi-Pipe Aggregate Replacement Systems III-B Expanded Polystyrene (EPS) Aggregate Systems III-C Chamber Subsurface Disposal Systems III-D
Design Standard IV	Subsurface Drip Disposal System
Design Standard V	Elevated Sand Mound Disposal System
Design Standard VI	Spray Irrigation Disposal System
Design Standard VII	Plant Rock Filter
Design Standard VIII	Sand Filters
Design Standard IX	Lagoons (Oxidation Ponds)
Design Standard X	Overland Discharge
Design Standard XI	Disinfection
Design Standard XII	Pumps and Pump Chambers
Design Standard XIII	Non-Waterborne Wastewater Systems

Mississippi State Department of Health

Regulation 2.0 Individual Onsite Wastewater Disposal Systems

Table of Contents

2.1	Purpose.....	MSDH 300-Section 02A-01
2.2	Authority	01
2.3	Definitions.....	01
2.4	General Provisions	08
	Disposal System Required	08
	Relation to Water Supply.....	08
	Miscellaneous	08
2.5	Responsibilities	09
	The Mississippi State Department of Health	09
	The Department of Environmental Quality.....	09
	The Developer, Owner or Owners or Their Agent	09
	The Water Supplier	10
	The Division of Onsite Wastewater	10
	The Environmental Health District Supervisor.....	11
	The County Environmentalist	11
	The Subdivider.....	12
	The Certified Installer	13
	The Professional Engineer	13
	Penalties	14
2.6	Procedures for Intent to Install and System Recommendations.....	14
2.7	Site Evaluation	15
2.8	Soil Wetness Evaluation	16
2.9	Design Based Systems	19
TABLE I :Design Based Systems.....		19
2.10	Performance Based Systems	20
	Prescribed Performance Standards.....	20
	System Design.....	20

	System Authorization.....	20
	Violation of Performance Standards	21
	Fine for Non-compliance	21
2.11	Approval of Disposal Systems.....	21
2.12	Existing Systems.....	22
2.13	Repair of Onsite Wastewater Disposal Systems	24
2.14	Temporary Onsite Wastewater Disposal Systems	25
2.15	Prohibited Uses of Individual Onsite Wastewater Disposal Systems	25
2.16	Location of Onsite Wastewater Disposal Systems.....	26
	TABLE II: Setback Requirements for Sensitive Waters	27
2.17	Pipe Specifications for Individual Onsite Wastewater Disposal	28
2.18	Experimental Onsite Wastewater Disposal System Protocol	28
2.19	Certification for Installers of Individual Onsite Wastewater Disposal Systems	30
	Certification Required.....	30
	Certification of Installers	31
	Re-Certification.....	31
	Responsibilities of The Certified Installer	32
	Administrative Fine	32
	Hearing Procedures	33
	Suspension/Revocation of Certification	33
2.20	Licensure for Persons Engaged in The Business or Practice of Removing and Disposing of The Sludge and Liquid Waste (septage) from Individual Onsite Wastewater Disposal Systems	34
	License Required.....	34
	Vehicles and Equipment	35
	Disposal.....	35
	Suspension/revocation of License.....	36
2.21	Registration of Manufacturers	37
2.22	Requirements for Third Party Certifiers	38

2.23	Hearings and Appeals	<u>39</u>
2.24	Exceptions, Exemptions, and Variances	<u>39</u>
2.25	Research Projects	<u>40</u>
2.26	Penalty for Violation of Regulations	<u>41</u>
2.27	Unconstitutionality Clause.....	<u>41</u>
	Certification of Regulation	<u>42</u>

MISSISSIPPI STATE DEPARTMENT OF HEALTH

2.0 REGULATION GOVERNING INDIVIDUAL ONSITE WASTEWATER DISPOSAL SYSTEMS

2.1 PURPOSE

The purpose of this regulation is to establish standards regarding the, design, installation and approval of individual wastewater disposal systems where requested, to require minimum sanitary facilities, and to establish requirements for persons engaged in the installation of onsite wastewater disposal systems, septic tank pumping and disposal, and the manufacture of septic tanks and alternative individual wastewater disposal systems to the extent necessary for the protection of public health.

2.2 AUTHORITY

The State Board of Health is authorized to promulgate these rules under and by virtue of Section 41-3-15 (4) (a) (b) (f) and Section 41-67-1 through 41-67-29 Mississippi Code of 1972, Annotated.

2.3 DEFINITIONS

- (1) Aerobic Treatment Unit (ATU) - a class I mechanical treatment plant as defined by the most current revision of the American National Standards Institute/National Sanitation Foundation International Standard Number 40.
- (2) Aggregate Replacement System - any subsurface disposal system that utilizes technology, design or media other than aggregate.
- (3) Aggregate System - any subsurface disposal system that utilizes gravel/crushed stone, tire chips, or other approved aggregate media.
- (4) Authorized agent - a representative of the Mississippi Department of Health.
- (5) Authorized manufacturer's representative - an installer, of mechanical wastewater treatment and/or disposal systems, who has been certified as factory-trained by the company he/she represents.
- (6) Available space - sufficient area in which to properly install the required individual onsite wastewater disposal system including the working area necessary to prevent excessive and unnecessary equipment traffic over the system and space allowance for future extensions.

- (7) Board - the Mississippi State Board of Health.
- (8) Certified Installer (Licensed Installer) - an installer who has completed the required certification course, received a minimum score of 70% on the examination, submitted all applications, the \$50.00 fee, and has been approved for licensure by the Health Authority.
- (9) Component Parts - all physical, mechanical, and electrical components of any wastewater disposal system
- (10) Continuous occupancy - occupancy of the dwelling on an unbroken daily basis.
- (11) Construct - the process of installation or repair of an individual onsite wastewater disposal system.
- (12) Containment System - an individual onsite wastewater disposal system that produces effluent meeting the Environmental Protection Agency's requirements for secondary treatment, where such effluent is confined on the property of the generator or land under easement in perpetuity to the generator using spray irrigation or overland discharge.
- (13) Conventional Subsurface Disposal System - any gravity-fed subsurface disposal field including aggregate and aggregate replacement systems ranging from 36 to 6 inches in depth.
- | | |
|-----------------------------------|------------------|
| Standard Subsurface Disposal | 25 in. to 36 in. |
| Shallow Subsurface Disposal | 13 in. to 24 in. |
| Ultra-shallow Subsurface Disposal | 6 in. to 12 in. |
- (14) Decentralized Wastewater Management Entity: a certificated utility that undertakes the centralized management and monitoring of an individual on-site wastewater disposal system or systems or clustered wastewater systems that service more than one (1) generator or individual family housing unit, including, but not limited to, planning, construction, operation and maintenance programs concerning those systems to be managed.
- (15) Decentralized Wastewater Management: a system of management of decentralized treatment systems (commonly referred to as individual sewage systems, onsite sewage disposal systems or package plants) including onsite and clustered systems used to collect, treat, and disperse or reclaim wastewater from individual dwellings, businesses, or small communities and service areas.

- (16) Decentralized Wastewater Treatment Systems: onsite or clustered wastewater systems that are used to treat and dispose of relatively small volumes of wastewater, generally from dwellings and businesses that are not connected to a centralized sewer system.
- (17) Department - the Mississippi State Department of Health.
- (18) Department of Environmental Quality - the Mississippi Department of Environmental Quality, Office of Pollution Control.
- (19) Design Based System - an individual onsite wastewater disposal system designed and installed in accordance with design standards outlined in this regulation.
- (20) Elevated Sand Mound - a soil absorption system that is elevated above the natural soil surface in a suitable fill material.
- (21) Feasibility Study - a report composed by a professional engineer comparing the most cost effective central sewage collection system to the appropriate individual onsite wastewater disposal system as regulated by the Mississippi Department of Health.
- (22) Fragipan - a loamy subsurface horizon with high bulk density relative to horizons above it, and is seemingly cemented when dry with hard or very hard consistency. When moist, fragipans have moderate or weak brittleness, and dry fragments slake or fracture when placed in water. Fragipans are usually mottled and slowly or very slowly permeable to water.
- (23) Frequent Flooding - flooding is likely to occur often under usual weather conditions (more than a 50 percent chance of flooding in a year, or more than 50 times in 100 years).
- (24) Health Authority - an authorized representative of the Mississippi Department of Health.
- (25) Impervious - resistant to penetration by air, water, and roots.
- (26) Individual Onsite Wastewater Disposal System (IOWDS) - a sewage treatment and effluent disposal system that does not discharge into waters of the state, that serves only one (1) legal tract, that accepts only human sanitary waste and similar waste streams maintained on the property of the generator, and that is designed and installed in accordance with this law and regulations of the board.
- (27) Lagoon - a shallow pond designed specifically to treat sewage by natural water purification processes under the influence of air and sunlight.

- (28) License - an official document, valid statewide, issued annually to wastewater disposal system installers and pumpers by the Health Authority.
- (29) Manufacturer - a person, firm, company, corporation, or association that produces products for the treatment and/or disposal of sewage. This includes, but is not limited to, aerobic treatment systems, septic tanks, subsurface drip irrigation systems and/or any other alternative individual wastewater disposal systems, including systems under experimental protocol.
- (30) Non-waterborne Disposal System - any non-water carried system that treats and/or disposes of human excreta.
- (31) Performance Standards - standards established to designate a level of treatment of wastewater that onsite wastewater treatment facilities must meet, including but not limited to BOD, TSS, nutrient reduction, fecal coliform etc. . . .
- (32) Permeability, soil - transmission of air and water through the soil.
- (33) Person- any individual, trust, firm, joint-stock company, public or private corporation (including a government corporation), partnership, association, state, or any agency or institution thereof, municipality, commission, political subdivision of a state or any interstate body, and includes any officer or governing or managing body of any municipality, political subdivision, or the United States or any officer or employee thereof.
- (34) Plot Plan - a descriptive drawing, including a legal description of the property, indicating the property dimensions, house location, plumbing stub-outs, driveways and other pertinent information for the proper determination of an adequate individual onsite wastewater disposal system.
- (35) Professional Engineer - a person that has met the qualifications as required under Section 73-13-23(1), Ms Code of 1972, Annotated and who has been issued a certificate of registration as a professional engineer.
- (36) Property of the Generator - land owned by or under easement in perpetuity to the generator, duly recorded in the courthouse.
- (37) Public Liability Insurance - Pursuant to Section 41-67-25(3)(d) of the MS Code of 1972, Annotated, public liability insurance shall be defined as insurance coverage, which provides protection to customers from improper or defective individual on-site wastewater systems or improper installation.

- (38) Pumper - a person engaged in the business or practice of removing and disposing of the sludge and liquid waste from individual on-site wastewater disposal systems.
- (39) Repair Work - correction of a malfunction of an existing system by replacement of some portion of the system.
- (40) Restrictive Horizons - soil horizons which restrict the movement of air and water.
- (41) Revocation - permanent withdrawal of rights and privileges granted by a license.
- (42) Sensitive Waters - public or private waters used for recreation (swimming, skiing, fishing), shellfish harvesting, potable water intake or other situations where people are likely to come into contact with the water.
- (43) Sewage - water-carried discharges from residences or similar establishments including excreta and other liquid waste.
- (44) Single Family Residence - a structure occupied by a related family unit.
- (45) Site Evaluation - the process of gathering information used to determine the suitability of the property for the construction of an individual onsite wastewater disposal system.
- (46) Skeletal - rock fragments 2 mm in diameter or larger make up 35 percent or more by volume; enough earth to fill interstices larger than 1 mm; the fraction finer than 2 mm is sandy, loamy, or clayey as defined by USDA particle-size classes.
- (47) Slope - deviation of a plane surface from the horizontal; when given in percent (%), it is the rise or fall of the land surface in feet per 100 feet of horizontal distance.
- (48) Sludge - the precipitated solid matter produced by the treatment of sewage.
- (49) Soil Boring - a hole bored or dug below the depth of the proposed subsurface disposal system in order to determine the suitability of the soil for subsurface absorption.
- (50) Soil Horizon - a layer of soil approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, and biological properties or characteristics including but not limited to color, structure, texture, consistence and Ph.
- (51) Soil Map - a map showing the distribution of soil types or other soil mapping units in relation to the prominent physical and cultural features of the earth's surface.

- (52) Soil Texture - the relative proportions of the various soil separates in a soil.
- (53) Soil Textural Classes - USDA standardized terms used to convey textural make-up of the fine-earth fraction less than two millimeters in diameter. The fine-earth fraction includes sand (2.0 - 0.05mm in size), silt (0.05mm - 0.002mm in size) and clay (less than 0.002mm in size) particles. The specific textural classes are defined as follows:
- (a) "Sand" - soil material that contains 85 percent or more of sand; the percentage of silt plus 1.5 times the percentage of clay shall not exceed 15.
 - (b) "Loamy Sands"- soil material that contains at the upper limit 85 to 90 percent sand and the percentage silt plus 1.5 times the percentage of clay is not less than 15; at the lower limit it contains not less than 70 to 85 percent sand and the percentage of silt plus twice the percentage of clay does not exceed 30.
 - (c) "Sandy Loams"- soil material that contains either 20 percent clay or less, and the percentage of silt plus twice the percentage of clay exceeds 30 and contains 52 percent or more sand; or less than 7 percent clay, less than 50 percent silt and between 43 and 52 percent sand.
 - (d) "Loam" - soil material that contains 7 to 27 percent clay, 28 to 50 percent silt and less than 52 percent sand.
 - (e) "Silt Loam" - soil material that contains 50 percent or more silt and 12 to 27 percent clay; or contains 50 to 80 percent silt and less than 12 percent clay.
 - (f) "Silt" - soil material that contains 80 percent or more silt and less than 12 percent clay.
 - (g) "Sandy Clay Loam" - soil material that contains 20 to 35 percent clay, less than 28 percent silt and 45 percent or more sand.
 - (h) "Clay Loam"- soil material that contains 27 to 40 percent clay and 20 to 45 percent sand.
 - (i) "Silty Clay Loam"- soil material that contains 27 to 40 percent clay and less than 20 percent sand.
 - (j) "Sandy Clay"- soil material that contains 35 percent or more clay and 45 percent or more sand.

- (k) "Silty Clay"- soil material that contains 40 percent or more clay and 40 percent or more silt.
- (l) "Clay" - soil material that contains 40 percent or more clay, less than 45 percent sand and less than 40 percent silt.
- (54) Soil Type - a subdivision of the soil series based on texture of the surface horizon.
- (55) Soil Wetness-conditions caused by seasonal high water table, perched water table, tidal water, seasonally saturated soils or by lateral water movement as determined by observation of colors of chroma 2 or less (Munsell color chart) in redoximorphic features or a solid mass. If drainage modifications have been made, a determination of the soil wetness conditions may be required by direct observations of the water surface during the period typical of high water elevations (December through March). However, colors or chroma 2 or less which are relic from minerals of the parent material shall not be considered indicative of a soil wetness condition.
- (56) Spray Irrigation - a system that utilizes spray irrigation heads to evenly distribute treated chlorinated effluent over the surface of the ground.
- (57) Subdivision - any land that is divided into ten or more lots, tracts, sites or parcels for the purpose of residential development.
- (58) Suspension - temporary or indefinite withdrawal or cessation of rights and privileges granted by a license.
- (59) Subsurface Drip Disposal - a subsurface disposal system utilizing subsurface drip emitter tubing for the equal distribution of treated effluent.
- (60) Topography - the configuration of the surface of the land (i.e., hilly, rolling, level).
- (61) Treatment - a process applied to wastewater which causes the resulting effluent to meet or exceed EPA secondary standards for treated wastewater for surface discharge and which does not endanger the public health.
- (62) Water Supplier - one that serves twenty five (25) individuals or fifteen (15) connections on a full time basis sixty (60) days or more per year.
- (63) Water Table - that level in saturated soil where the hydraulic pressure is zero.
- ~~(63) Water Table, perched or seasonal - the water table of a discontinuous saturated zone in a soil, indicated by "gleyed" colors of Chroma 2 or less (Munsell color chart) in mottles or a solid mass.~~

2.4 GENERAL PROVISIONS

1. Disposal System Required

At each home where people reside and at each establishment or place where people are employed or congregate there shall be provided a sanitary method for the disposal of all human excreta and other liquid waste adequate to the needs of the people to be served.

- a. All such homes and places mentioned above where a system of sanitary sewers is available shall have a properly constructed sewer connection to said sewer system into which all human excreta and other liquid waste shall be disposed.
- b. Where a system of sanitary sewers is not available, all human excreta and other liquid waste shall be disposed of into a properly constructed and maintained individual wastewater disposal system. No such system shall be permitted to discharge in a manner which may create a public health hazard or which may result in the wastewater leaving the property of the generator.
- c. Criteria for location, design and construction of such individual wastewater disposal systems are found in this Regulation and in the EPA Design Manual for Individual Onsite Wastewater Disposal Systems.

2. Relation to Water Supply

- a. No individual wastewater disposal system, new or existing, shall be so located as to create a hazard to any potable (public or private) well, spring, cistern, water reservoir, suction line or abandoned well.
- b. No such system intended for the disposal of human excreta or other liquid or solid wastes shall be constructed which is of sufficient depth to pass into, nor so that its contents may pass into, any underground water-bearing stratum which is or might be used for a drinking water supply.
- c. Abandoned wells shall not be used for the disposal of human excreta or other liquid waste.

3. Miscellaneous

- a. Human excreta and undigested sludge shall not be used as fertilizer.

- b. Individual onsite wastewater disposal systems which require periodic maintenance shall be maintained in accordance with factory specifications and recommendations of the Health Authority and the contents disposed of in a manner approved by the Health Authority.
- c. All abandoned earth pits used for the disposal of human excreta shall be properly filled with earth in a manner approved by the Health Authority.
- d. Liquid wastes from homes or business establishments, offices, and places where people reside, are employed, or congregate, not covered in preceding sections shall be disposed of in a manner which will not create a public health hazard.

2.5 RESPONSIBILITIES

1. **The Mississippi State Department of Health shall be responsible for the following:**

Initial onsite inspection, recommendation of system type(s) acceptable for installation, and where requested by the developer, owner or owners or their agent, approval of an individual on-site wastewater disposal system.

2. **The developer, owner or owners or their agent shall be responsible for the following:**

- a. The developer, owner or owners or their agent, of any such property mentioned herein shall be responsible for submitting a Notice of Intent to the local county health department prior to constructing or placement of a mobile, modular or permanently constructed residence which may require the installation of an individual on-site wastewater disposal system and shall be responsible for proper operation and maintenance of such system.
- b. Providing a plot plan, legal description and payment of a \$50.00 fee for a soil and site evaluation/system recommendation.
- c. If the property owner or developer requests approval of systems under the purview of the Department of Health, as described above, the person seeking the approval should contact the department prior to construction of the system.

- d. The owner who installs an IOWDS on his/her own property, pursuant to Section 41-67-25 (1), Mississippi Code of 1972, shall sign and file an affidavit with the county health department.

3. **The Water Supplier shall be responsible for the following:**

No new permanent residential water service connection shall be provided to any mobile, modular or permanently constructed residence, building or facility unless the owner, lessee or developer shows proof of submission of the Notice of Intent to the county health department.

4. **The Division of Onsite Wastewater shall be responsible for the following:**

- a. Registration of onsite wastewater equipment and products, systems under experimental protocol, and other alternative individual wastewater systems acceptable for use in Mississippi. A current list inclusive of manufacturer, model number and other pertinent information shall be available at the local county health department.
- b. Coordination of policy development, monitor district/county program implementation and provide technical assistance.
- c. Provide initial certification, continuing education and training for installers of individual onsite wastewater disposal systems and authorized agents of the Mississippi State Department of Health.
- d. Train each Public Health Environmentalist or other authorized agent of the Department of Health in the review and approval of design, construction and installation of IOWDS, as well as the operation, repair or maintenance of such systems, soil permeability tests or soil and site evaluations, and inspections of IOWDS in accordance with rules and regulations.
- e. Review of all subdivision proposals for the feasibility of individual onsite wastewater disposal systems to provide safe and adequate wastewater treatment and disposal.

5. **The Environmental Health District Supervisor shall be responsible for the following:**

- a. Reviewing the suitability of a site for an IOWDS containment system.
- b. Certifying the results of soil/site evaluations performed on all subdivisions developed after the effective date of this Regulation.

- c. Conducting the joint soil/site evaluation system recommendation, with a Program Specialist from the Division of Onsite Wastewater, on lots where a variance has been requested.

6. The County Environmentalist shall be responsible for the following:

- a. Upon receipt of the Notice of Intent provide complete information on individual onsite wastewater disposal systems including but not limited to applicable rules and regulations regarding the design, construction, installation, operation, maintenance and known requirements of lending institutions for approval of such systems.
- b. Performing the soil/site evaluation on an individual lot within five working days of receipt of the application for soil/site evaluation and required supporting documentation.
- c. Determining the suitability of a site for the installation of an IOWDS, contained on the property of the generator.
- d. Following an initial soil/site evaluation, the type or types of disposal systems acceptable for installation on the lot shall be recommended within ten working days, unless there are conditions revealed in the initial evaluation that require further investigation, and a copy of the findings furnished the applicant.
- e. If the soil/site evaluation indicates no design based system can be recommended, the department shall state in writing the reasons for the disapproval and inform the applicant that he/she has the option to employ an engineer to design an onsite wastewater system for the site.
- f. Providing all forms necessary for compliance with this Regulation.
- g. Upon request approve all systems that comply with provisions of this Regulation based on an inspection as required and by completing the approval form.

7. If the property is to be subdivided, the subdivider shall be responsible for the following:

- a. Furnishing a legal description and site plan of the entire area to be developed. The site plan shall show lot lines, lot sizes (dimensions and total area), and existing ground contours on two foot intervals. The site plan shall show all

lakes, ponds, streams and any known or possible wetland areas. Names of adjacent property owners and their property lines abutting the proposed development shall be shown. Property adjoining the proposed subdivision of which the subdivider holds legal title must also be shown with a letter of intention concerning this property.

- b. Submitting the feasibility study to the Mississippi Department of Health, Division of Onsite Wastewater whenever 35 or more lots are involved. The Division of Onsite Wastewater must review and respond to said study before any lot can be evaluated or approved. When residential subdivisions are proposed which are composed of fewer than thirty-five (35) lots, and no system of sanitary sewers is available to which collection sewers may be feasibly connected, the State Health Officer may waive the requirement for a feasibility study. Such waiver of the feasibility study will not be granted if the proposed development meets any one of the following criteria:
 - i. Is within a wastewater utility district where that utility has certified it will provide sewer service
 - ii. Is within a regional wastewater authority that has certified it will provide sewer service
 - iii. Is within one mile of a city with sewer availability that has certified it will provide sewer service
 - iv. MSDH analysis reflects that soil and site conditions may not be conducive for Individual Onsite Wastewater Disposal Systems.
- c. No feasibility study or community sewage system shall be required for subdivisions designed, laid out, platted or partially constructed before July 1, 1988 or subdivisions platted and recorded between July 1, 1995 and June 30, 1996.

8. The certified installer shall be responsible for the following:

- a. Constructing the system in accordance with Mississippi State Board of Health Regulations.
- b. In a subdivision with less than 35 lots, where the feasibility has been waived, pursuant to Section 41-67-4 (2), Mississippi Code of 1972, if the installer chooses to construct a system other than one of the systems recommended by

the Health Authority, the installer must give written certification that the system(s) proposed will adequately serve the site(s) with an approved wastewater disposal system(s) in compliance with the Regulation.

- c. Notifying the local health department at least 48 hours prior to the date construction is to begin if approval has been requested for the individual onsite wastewater disposal system to be installed.
- d. Signing and filing with the county health department an affidavit for all systems installed.

9. **The professional engineer shall be responsible for the following:**

- a. Designing, constructing, and/or installing individual onsite wastewater disposal systems that comply with the Regulation Governing Individual Onsite Wastewater Disposal and the Mississippi Individual Onsite Wastewater Disposal System Law of 1978, as amended.
- b. Notifying the county health department in writing of any individual onsite wastewater disposal system for which he/she will provide design, construction, and/or installation service.
- c. Providing, for Department review and comment, appropriate documentation to include but not limited to soil/site evaluation, plot plan with legal description and a detailed set of plans and specifications for the design and construction of said proposed system bearing the registered engineer's seal on all systems.
- d. Providing an approvable design modification for any submitted design where deficiencies with law or regulation were identified by the Department.
- e. Providing, to the property owner or the developer, complete information, including all applicable requirements and regulations on all systems recommended with the requirements and regulations for the systems he/she recommends for installation.
- f. Signing and filing with the Department a letter of completion, bearing the registered engineer's seal, stating the system was installed in compliance with the approved design plans and an affidavit by the installer stating the system was installed according to the engineer's design and specifications for all systems he/she has designed, constructed or installed.

10. Penalties:

- a. Violation of Sections 9 and 10 above will result in an administrative fine not to exceed \$1000 dollars.
- b. Violations of Section 2.5 3.b, Section 2.17 1.c, Section 2.18 1.b, or Section 2.19 1.b shall result in a penalty equal to one and one-half (1½) times the amount of the fee due and payable.

2.6 PROCEDURES FOR INTENT TO INSTALL AND SYSTEM RECOMMENDATIONS

1. Prior to construction or placement of any mobile, modular, or permanently constructed residence which may require the installation of an individual on-site wastewater disposal system the developer, owner or owners or their agent shall submit a signed Notice of Intent to the county health department.
2. No new residential water service connection shall be provided to any mobile, modular or permanently constructed building or facility unless the owner, lessee or developer shows proof of the submission of the Notice of Intent.
3. The property owner or developer must present a copy of the completed Notice of Intent to the water supplier to obtain a water connection.
4. Upon receipt of the Notice of Intent, the Health Authority shall charge a fee of \$50.00 to the developer owner or owners or their agent for a soil and site evaluation and recommendation of individual onsite wastewater disposal systems (if any) suitable for installation. The fee is payable upon submitting the Notice of Intent. Failure to pay shall result in penalties as required by law.
5. The fee authorized shall not be assessed for any system operated by state agencies or institutions, including without limitation, foster homes licensed by the State Department of Human Services.
6. The Department shall provide such owner or developer with complete information on individual on-site wastewater disposal systems, including but not limited to applicable rules and regulations regarding the design, construction, installation, operation, and maintenance of individual on-site wastewater disposal systems and known requirements of lending institutions, except in cases where a professional engineer provides services relating to design, construction or installation of the individual on-site wastewater disposal system.

7. Upon submission, by the developer, owner or owners or their agent, of a Notice of Intent, plot plan and a legal description, the County Environmentalist shall make a soil and site evaluation.
8. County Environmentalists are required by law to make the soil and site evaluation within five days of the request. This is to be interpreted in the following manner:
 - a. The soil and site evaluation shall be performed as soon as possible but not later than five working days after the Notice of Intent, plot plan and a legal description have been submitted.
 - b. After the soil and site evaluation, the department has 10 additional working days to provide a list of system recommendations, unless there are conditions requiring further investigation that are revealed in the initial evaluation. This information shall be given to the property owner or developer so that the owner or developer may select the system to be installed.
9. The department must approve or disapprove the request, for site evaluation, within fifteen (15) working days following submission of all required documentation. If the department disapproves the request, the department shall state in writing the reasons for the disapproval. If the department does not respond to the request within fifteen (15) working days, the request for approval of an individual on-site wastewater disposal system shall be deemed approved.
10. The system/systems recommendation will be valid for one year from the date of the soil/site evaluation. An evaluation that is more than one year old can be reviewed for continuation. If there have been no changes in the regulation, potential wastewater flow, house location or condition of the lot, the system recommendation can be continued.

2.7 SITE EVALUATION

1. Upon receipt of the Notice of Intent, a plot plan and a legal description, the soil and site evaluation will be conducted by the county Environmentalist.
2. Information obtained during the soil and site evaluation will determine which type(s) of IOWDS may be utilized for an individual lot.
3. Prior to completing the Soil and Site Evaluation/System Recommendation, the Environmentalist shall visit the lot and conduct the soil and site evaluation.

4. The soil determinations will be made based on soil borings to a depth of five feet or to a depth sufficient to reach a restrictive horizon. Restrictive soil or site conditions may preclude the use of any subsurface disposal system.
5. A soil and site evaluation will be based on the following criteria:
 - a. Absence of or protection from frequent flooding.
 - b. Landscape position with good surface runoff.
 - c. Slopes of less than 15%.
 - d. Depth to high water table of greater than four feet.
 - e. Depth to bedrock, fragipan or plinthite of greater than four feet.
 - f. Soil texture and color defined by the Natural Resource Conservation Service as indicating good drainage and suitability for soil absorption, based on a soil boring of five feet.
 - g. Available area in which to install an individual onsite wastewater disposal system meeting all requirements of this regulation. The area for repairs and future extensions shall be no less than 50% of the space required for the recommended system. Systems utilizing surface land application discharge are exempt from the 50% additional area requirement.
6. The non compliance of one or more of the above items may (1) require a design alteration of an underground system or (2) prohibit the use of some or all design based IOWDS on the site.

2.8 SOIL WETNESS EVALUATION

Soil wetness conditions caused by a seasonal high-water table, perched water table, tidal water, seasonally saturated soil or by lateral water movement shall be determined by field evaluation for soil wetness colors and field observations, and may be assessed by well monitoring.

1. Basic Field Evaluation Procedures: A soil wetness condition shall be determined by field evaluation utilizing one of the following procedures:
 - a. A soil wetness condition may be determined by the indication of colors of chroma 2 or less (Munsell Color Charts) at $\geq 2\%$ of soil volume in mottles or matrix of a horizon or horizon subdivision.

- b. Soil wetness condition may be determined by the indication of redoximorphic features at $\geq 2\%$ of soil volume of a horizon or horizon subdivision in accordance with methods in the Field Book for Describing and Sampling Soils, NRCS, USDA. This procedure shall take precedence over the Subitem (a) of this Paragraph. The Field Book is hereby incorporated by reference, including any subsequent amendments and editions.
2. A Soil wetness condition shall also be determined by the periodic direct observation or indication of saturated soils or a perched water table, or lateral water movement flowing into a bore hole, monitoring well, or open excavation above a less permeable horizon or horizon subdivision, that may occur without the presence of colors of chroma 2 or less or redoximorphic features. A soil wetness condition caused by saturated soils or a perched water table shall be confirmed to extend for at least three consecutive days. The shallowest depth to soil wetness condition determined by Subparagraph (1) or (2) of this Section shall take precedence
3. Alternative Procedures for Soil Wetness Determination:

The Owner or the Owner's Legal Representative (Applicant) shall have the opportunity to submit documentation that the soil wetness condition and resultant site classification be alternately determined and reclassified by direct monitoring in accordance with a Direct Monitoring Procedure made pursuant to Paragraph (4) of this Regulation. This determination shall take precedence over the determination made pursuant to the Basic Field Evaluation Procedures [Paragraph (1) of this Regulation], when the conditions of Paragraph (4) of this Regulation are met.
4. Direct Monitoring Procedure:

Soil wetness conditions may be determined by direct observation of the water surface in wells during periods of typically high water elevations utilizing the following monitoring procedures and interpretation method.

 - a. The applicant shall notify the Division of Onsite Wastewater of the intent to monitor water surface elevations by submitting a proposal that includes a site plan, well and soil profile at each monitoring location, and a monitoring plan no later than 30 days prior to the monitoring period. An applicant other than the property owner shall have written authorization from the owner to be the owner's legal representative. Soil wetness and rainfall monitoring shall be conducted under the responsible charge of a third-party consultant(s), an Engineers, Geologists, or Soil Scientists licensed or registered in the State of Mississippi. The Owner shall submit the name(s) of the consultant(s) performing any monitoring on their behalf to the Division of Onsite Wastewater.

- b. The applicant or his/her agent shall submit a site plan showing proposed sites for wastewater system, shall provide the longitude and latitude of the site, location of monitoring wells, and all drainage features that may influence the soil wetness conditions, and specify any proposed fill and drainage modifications.
 - c. The applicant or his/her agent shall submit a monitoring plan indicating the proposed number, installation depth, screening depth, soil and well profile, materials and installation procedures for each monitoring well, and proposed method of analysis. A minimum of three water level monitoring wells shall be installed for water surface observation at each site. Additional wells shall be required for sites handling systems with a design flow greater than 600 gallons per day (minimum of one additional well per 600 gallons per day increment).
 - d. The Division of Onsite Wastewater shall be given the opportunity to conduct a site visit and verify the appropriateness of the proposed plan. Well locations shall include portions of the initial and replacement disposal site(s) containing the most limiting soil/site conditions. Prior to installation of the wells the Division of Onsite Wastewater shall approve the plan. If the plan is disapproved, the Division of Onsite Wastewater shall include specific changes necessary for approval of the monitoring plan.
 - e. Wells shall extend at least five feet below the natural soil surface. However, a well or wells which extend(s) down only 40 inches may be used if they provide a continuous record of the water table for at least half of the monitoring period, and one or more shallower wells may be required on sites where shallow lateral water movement or perched soil wetness conditions are anticipated.
 - f. Water surface in the monitoring wells shall be recorded at least daily from December 1 to March 31, taken at the same time during the day (plus or minus three hours). A rain (precipitation) gauge is required within one-half mile of the site. At least daily rainfall shall be recorded beginning no later than November 1 through March 31 (the end of the well monitoring period).
5. A report of the investigations made for the Direct Monitoring Procedure shall be prepared prior to approval of the soil wetness condition determination by the Department. Reports prepared by the registered professional shall bear the professional seal and/or registration number of the third party consultant who conducted the investigation. A request for technical review of the report by the Department shall include digital copies of monitoring data and digital copies of model inputs, output data, and graphic results, as applicable.

2.9 DESIGN BASED SYSTEMS

1. The system types [TABLE I] will be determined by the findings of the soil and site evaluation. The property owner or developer will be furnished a detailed list of all onsite wastewater disposal systems that can be recommended for the particular site.
2. Within the limitations posed by the Mississippi Individual Onsite Wastewater Disposal Law of 1978, as subsequently amended, it will be the homeowner's prerogative to choose, from the list of system recommendations, the type of system to be installed.
3. It should be recognized that some lots, because of size and/or severe soil/site conditions, cannot support an IOWDS. In such cases, **no design based system** shall be recommended by the Health Authority.

TABLE I : DESIGN BASED SYSTEMS	
1.	Septic tank and aggregate type subsurface absorption <ol style="list-style-type: none">a. Standard Subsurface Disposalb. Shallow Subsurface Disposalc. Ultra-shallow Subsurface Disposal
2.	Septic tank and aggregate replacement subsurface absorption <ol style="list-style-type: none">a. Standard Subsurface Disposalb. Shallow Subsurface Disposalc. Ultra-shallow Subsurface Disposal
3.	Treatment (class I plant, septic tank with sand filter, and septic tank or treatment plant and plant/rock filter) and containment system: <ol style="list-style-type: none">a. Sprinklerb. Overland
4.	Septic tank or treatment plant and mound (sand mound)
5.	Septic tank and alternating absorption fields
6.	Septic tank and lagoon with discharge contained
7.	Pretreatment and approved subsurface drip disposal

2.10 PERFORMANCE BASED SYSTEMS

Performance based wastewater systems may be approved on lots that, as a result of the soil/site evaluation, have restrictions that preclude the use of a design based onsite wastewater disposal system.

1. Prescribed Performance Standards:

- a. Lots that do not border sensitive waters will be required to have systems that will treat the wastewater to a standard of ten (10) mg/l Biochemical Oxygen Demand (BOD), ten (10)mg/l Total Suspended Solids (TSS), five (5) mg/l nitrogen, three (3) mg/l phosphorous and fecal coliform levels less than or equal to 200 colony forming units per 100 milliliters.
- b. Lots that border sensitive waters will be required to have systems that will treat the wastewater to a standard of five (5) mg/l Biochemical Oxygen Demand (BOD), five (5) mg/l Total Suspended Solids (TSS), two (2) mg/l nitrogen, one (1) mg/l phosphorous and fecal coliform levels not to exceed 200 colony forming units per 100 milliliters or equal to or less than the (historical) background count if that background count is less than 200 colony forming units per 100 milliliters.

The treated effluent will be measured at the outfall line of the treatment facility before it enters the final disposal site.

2. System Design

- a. The performance based system must be designed by a professional engineer to meet the prescribed standards in 2.9 - 1. a. or b. and maintain the effluent on the property of the generator.
- b. The design must be certified by the engineer and submitted, along with supporting documentation, to the Division of Onsite Wastewater for review and concurrence.

3. System Authorization

- a. The performance based system will be authorized on an annual basis.
- b. The property owner will be required to have samples collected and monitoring reports compiled, by a professional engineer or a licensed wastewater operator holding a class II or greater certification, and submitted as required.

- c. Monitoring reports must be submitted to the Department on the following schedule:
 - i. Systems that are authorized for use on lots that border sensitive waters must be monitored and reports provided on a quarterly basis.
 - ii. Systems that do not border sensitive waters must be monitored and reports provided on a semiannual basis.
 - iii. The Department will, on a random schedule, collect monitoring samples of all systems authorized under performance standards.
- d. Samples must be run in accordance with the most current version of the Code of Federal Regulations (CFR 40 part 136) Guideline Establishing Test Procedures for The Analysis of Pollutants.
- e. Upon receipt of the monitoring report(s) verifying the system to be in compliance with the prescribed performance standards the system authorization will be continued.

4. Violation of Performance Standards

If at any time the authorized system is in violation of the prescribed performance standards the property owner will be required to initiate repairs to bring the system back into compliance. Failure to maintain the system to performance standards will result in a fine as prescribed by law.

5. Fine for Non-compliance

The property owner or lessee of an individual onsite wastewater disposal system authorized pursuant to Section 41-67-3 (4), Mississippi Code of 1972, Annotated shall incur a civil penalty not to exceed fifty dollars (\$50.00) for each day the system fails to meet the performance standards of that system after the thirty-day period specified in Section 41-67-21 (1) Mississippi Code of 1972, Annotated.

2.11 APPROVAL OF DISPOSAL SYSTEMS

- 1. If the individual requests an approval by the Department of the system installed, the County Environmentalist shall make a final inspection of the system as constructed. If the design, construction and installation of such system is in accordance with the rules and regulations of the Department, and upon receipt of the installer's affidavit, approval shall be granted.

If a professional engineer designs, constructs or installs or directly supervises the construction or installation of a design-based IOWDS in accordance with the regulation and stamps the appropriate documentation with that professional engineer's seal, the department shall approve the design, construction or installation of the system, if requested.

Approval shall be granted only after the Environmentalist has determined that all administrative requirements stated in this Regulation have been satisfied.

2. The Department reserves the right to deny the approval if there is extensive grading of the lot or change of house or individual well location after the system recommendations have been issued. Final approval of the system should not be issued until both the house and well have been constructed.
3. The issuance of an approval by the Health Authority does not denote or imply any guarantee that the wastewater disposal system will function for any specified period of time.

2.12 EXISTING SYSTEMS

The request for an inspection of an existing system must be on forms provided by the county health department. The homeowner must indicate to the best of his/her ability the system type, location and status of the system.

1. Existing systems that do not discharge off the property of the generator, may be inspected and shall be considered acceptable if they are functioning properly, subject to the following criteria:
 - a. Subsurface disposal
 - i. The residence shall have been occupied for a minimum of six months inclusive of inspection date.
 - ii. No effluent discharge off the property of the generator.
 - iii. No effluent from an underground type system seeping to the surface.
 - iv. If a private or public water supply is present, the well is located a minimum of 100 feet from and at a higher elevation than the disposal system and is protected from surface contamination by a concrete slab

of a thickness of at least four (4) inches extending at least two (2) feet in all directions from the well casing.

- b. Gravity fed (overland) surface discharge
 - i. The system must have been in operation for minimum of one month
 - ii. No effluent discharge off the property of the generator (except as specified in Section 2.11 part 2)
 - iii. If a private or public water supply is present, the well is located a minimum of 100 feet from and at a higher elevation than the disposal system and is protected from surface contamination by a concrete slab of a thickness of at least four (4) inches extending at least two (2) feet in all directions from the well casing.
 - c. Mechanical treatment and other mechanical land application systems
 - i. The system must be in operation to allow for a visual inspection for compliance with the regulation.
 - ii. No effluent discharge off the property of the generator (except as specified in Section 2.11 part 2)
 - iii. If a private or public water supply is present, the well is located a minimum of 100 feet from and at a higher elevation than the disposal system and is protected from surface contamination by a concrete slab of a thickness of at least four (4) inches extending at least two (2) feet in all directions from the well casing.
 - d. Existing systems that were originally allowed under a variance can be accepted if there is record of the variance in the file and the system is installed and functioning in accordance with the conditions of the variance.
2. Previous Health Department approvals of existing systems that discharge off the property of the generator shall continue to be honored by the Health Department when:
- a. Such approvals were made in compliance with then existing State Laws and Regulations
 - b. Such systems are in operation and are presently functioning properly.

3. For systems at residences that have not been occupied for the required length of time, in lieu of an approval, system recommendations shall be given after a satisfactory soil and site evaluation, indicating that the lot is acceptable for the use of an onsite wastewater disposal system. Later, after occupancy of the residence the required length of time and if an inspection of the existing system determines it is functioning properly, a final acceptance of the system may be granted.
4. For properly functioning existing systems, in cases where a medical necessity requires the housing of an immediate family member in a mobile home adjacent to a permanent dwelling, a connection may be made to an existing system, provided the wastewater flow is not projected to increase significantly more than if the family member were housed in the permanent dwelling. A doctor's statement of the medical necessity shall be on file with the Department. The approval shall be valid only for this particular situation.
5. A \$50.00 fee will be charged for a soil/site evaluation of an existing system.
6. The fee shall not be charged again after payment of the initial fee for any system that has been installed in accordance with all requirements within a period of twenty-four (24) months following the date that the system was originally installed.

2.13 REPAIR OF ONSITE WASTEWATER DISPOSAL SYSTEMS

1. Repairs to wastewater disposal systems do not have to be approved by the Department. However, Section 41-67-21, Mississippi Code of 1972, Annotated states the following:
 - a. The State Department of Health may require a property owner to repair a malfunctioning IOWDS on the owner's property not later than the thirtieth day after the date on which the owner is notified by the department of the malfunctioning system.
 - b. The property owner must take adequate measures as soon as practicable to abate an immediate health hazard.
 - c. The property owner may be assessed a penalty not to exceed five dollars (\$5.00) per day following the thirty-day period specified in Section 41-67-21 (1) , Mississippi Code of 1972, Annotated that the individual onsite wastewater disposal system remains unrepaired.
2. In all cases failing existing systems should be repaired or replaced, where possible, with a fully functioning system meeting all requirements of the regulation. However, in cases where the repair or replacement of the existing system, to full compliance

with regulation, is not possible, the existing system shall be repaired to adequately treat the effluent, reduce the volume of effluent and to the greatest extent possible confine the discharge to the property of the generator. If repairs are made to significantly upgrade the failing existing individual onsite wastewater system, the department shall approve the system, if requested.

2.14 TEMPORARY ONSITE WASTEWATER DISPOSAL SYSTEMS

Temporary individual onsite wastewater disposal systems may be approved in otherwise unapprovable areas only after a contract has been awarded for the construction of municipal or community sewers that upon completion will adequately serve the property. Temporary individual onsite wastewater disposal systems shall only be approved under the following conditions:

1. If the proposed central system shall not be completed and available for use within six (6) months, a complete IOWDS complying with all requirements of the board may be installed. Upon completion of the sewer construction the onsite system shall be abandoned and connection be made to the sewer.
2. If the proposed central system shall be available and ready for use within a period not to exceed six (6) months, or where a minor extension is to be made to a municipal system by the municipality and no contract is to be awarded, an IOWDS with a minimum capacity of three hundred (300) gallons capacity and at least sixty percent (60%) of the required disposal system may be installed. No approval under this subsection can be granted unless the professional engineer designing the sewer system has certified in writing that the public sewer or extension shall be completed within six (6) months, and the owner of the temporary system has certified in writing that connection to the public sewer shall be made as soon as it becomes available.

2.15 PROHIBITED USES OF INDIVIDUAL ONSITE WASTEWATER DISPOSAL SYSTEMS

IOWDS shall not be used to treat and dispose of the following, therefore they must be referred to the Department of Environmental Quality, Office of Pollution Control.

- a. Waste from commercial slaughter houses.
- b. Embalming wastes from funeral homes.
- c. Any waste containing high levels of any contaminants that might pollute groundwater or endanger drinking water supplies.
- d. Other waste as determined by the Health Authority.

2.16 LOCATION OF ONSITE WASTEWATER DISPOSAL SYSTEMS

1. All components of the onsite wastewater disposal system shall be located a minimum of:
 - a. five feet from any dwelling.
 - b. ten feet from any property line.
2. Any vessel holding wastewater shall be located a minimum of 50 feet from any public, private or individual potable water source.
3. The effluent disposal field (subsurface, land application or mound type) shall be located at a lower elevation and a minimum of 100 feet from any public, private or individual potable water source.
4. Potable water lines shall not pass under or through any part of the sewage disposal system. Where a water supply line must cross a sewer line, the bottom of the water service within ten feet of the point of crossing, shall be at least 12 inches above the top of the sewer line. The sewer line shall be of Schedule 40 pipe with cemented joints at least ten feet on either side of the crossing. Water and sewer lines shall not be laid in the same trench. The water and sewer lines, when laid on the same grade, shall maintain a minimum separation distance of 10 feet.
5. The surface of or the surface above the disposal field shall not be used for vehicular traffic or vehicular parking.
6. No portion of an onsite wastewater disposal system shall be located under dwellings or other permanent structures.
7. Effluent disposal systems shall not be located in depressed areas where surface water will accumulate. Provision shall be made to minimize the flow of surface water over the effluent disposal field.
8. Subsurface wastewater disposal fields located on slopes of less than eight percent shall have a minimum setback from recreational waters, shellfish waters or other sensitive areas as prescribed in **TABLE II**.
9. Subsurface wastewater disposal fields located on slopes of greater than eight percent shall be located a minimum of 100 feet from recreational waters, shellfish waters and other sensitive areas.

10. Slopes of greater than 30% shall not be considered for subsurface disposal installation.
11. Where all or part of the onsite wastewater disposal system is proposed to be installed on property other than the owner's, an easement in perpetuity shall be legally recorded in the proper county. The easement shall be of sufficient area to permit access, construction and maintenance of the onsite sewage disposal system.
12. No site for an effluent disposal field or expansion area shall be approved which is located wholly within an area which is frequently flooded, swamp, marsh, or wetland. Except that if permits have been issued by the proper regulatory agency authorizing the use of wetlands for building sites, the property shall be evaluated using standard soil and site criteria for IOWDS.
13. When a proposed lot is located partially within a frequently flooded area, that portion of said lot not within the flood prone area may be considered for approval for the effluent disposal field.
14. There shall be maintained a minimum of 12 inches of unsaturated soil between the bottom of the subsurface disposal system and a perched or seasonal water table in soils that contain a restrictive horizon (fragipan, chalk, bedrock, clay or silty clay) within five feet of the surface.
15. There shall be maintained a minimum of 24 inches of unsaturated soil between the bottom of the subsurface disposal system and any perched or seasonal water table in soils that do not contain a restrictive horizon (fragipan, chalk, bedrock, clay or silty clay) within five feet of the surface.
16. Easements or right-of-way areas for utilities, surface or subsurface drainage, roads, streets, ponds or lakes shall not be used as available space for location of individual onsite sewage disposal systems.

TABLE II SETBACK REQUIREMENTS FOR SENSITIVE WATERS

Setback Requirements from Sensitive Waters For all Subsurface Absorption Field Areas on Slopes of 8 Percent or Less:

*Soil Textural Class	Minimum Distance From Water Edge
Gravel (Skeletal)	Not Applicable
Coarse to medium sand, fine sand,	100 Ft.

loamy sand, sandy loam, silty clay, clay

Loam, silt, silt loam, sandy clay loam,
Silty clay loam, clay loam,

50 Ft.

*The texture of the subsoil material having the greatest permeability rates within the absorption area, inclusive of material to a depth of two feet below the absorption trenches or beds.

2.17 PIPE SPECIFICATIONS FOR INDIVIDUAL ONSITE WASTEWATER DISPOSAL

1. The pipe shall conform to all applicable ASTM standards and must be marked with the ASTM specification which it meets.
2. Pipe used for conventional subsurface effluent disposal lines shall be a minimum of four inches in diameter.
3. Schedule 40 pipe (4 inches in diameter) shall be used into and out of any septic tank, treatment plant, chlorine contact chamber or pumping chamber for a distance sufficient to reach undisturbed earth; provided, pipe used for conducting treated effluent to surface discharge may be a minimum of three inches in diameter. However if the house sewer stub-out is 3 inches in diameter the effluent line connecting the house stub-out to the 4-inch inlet of the tank may be a 3-inch schedule 40 pipe.
4. Standard manufactured fittings compatible with the pipe shall be used to connect all piping within a wastewater disposal system.

2.18 EXPERIMENTAL ONSITE WASTEWATER DISPOSAL SYSTEM PROTOCOL

1. Manufacturers shall make application to the Division of Onsite Wastewater for an Experimental Individual Onsite Wastewater Disposal Temporary Permit for the installation of a limited number of systems to be evaluated over a prescribed period of time. The application shall include:
 - a. A letter listing their distributors and installers in the State of Mississippi. Installers shall be licensed in accordance with Section 41-67-25, Mississippi Code. Certified installers shall be the only personnel approved to install experimental onsite wastewater systems. The letter shall certify all their

distributors and installers have been instructed and trained on the installation and operation of the experimental onsite wastewater disposal system.

- b. A monitoring protocol, outlining a testing plan for a representative number of installations. The protocol shall include a defined list of parameters to be monitored and a schedule for the completion of the outlined activities.
 - c. Remittance of the \$100.00 manufacturer registration fee.
2. The Division of Onsite Wastewater shall review proposed experimental systems and issue an Experimental Onsite Wastewater Disposal Temporary Permit and system registration to the manufacturer. This permit will indicate the conditions under which a limited number of experimental systems may be installed. A copy of this permit will be distributed to all District Environmentalists.
3. Authorized distributors or installers shall make application for each installation of an approved experimental system to the District Environmentalist. In addition to documentation required by Section 41-67-25 Mississippi Code, the application will include:
 - a. A consent letter from the property owner or authorized agent, on forms provided by the Department, acknowledging the experimental nature of the system and holding the Mississippi State Department of Health harmless regarding the installation or use of an experimental system. The property owner or authorized agent shall agree to allow the distributor, installer and personnel from the Mississippi State Department of Health access to the site at reasonable hours to evaluate the functioning of the system.
 - b. A copy of the written warranty to the property owner or his/her authorized agent certifying the replacement of a failing experimental system with an approved alternative system within the testing period.
 - c. A copy of the Experimental Onsite Wastewater Disposal Temporary Permit for the system.
4. The District Environmentalist and Program Specialist will evaluate the application, perform a site evaluation, complete a Soil and Site Evaluation/System Recommendation (Form 335) for each application, and forward the review, along with all required documentation, to the Division of Onsite Wastewater for approval.
5. The Division of Onsite Wastewater shall approve or deny requests for individual installations of approved experimental systems based on the review of information

submitted by the District Environmentalist and Program Specialist. Approval or denial shall be issued within ten days of the receipt of the review information.

6. On approval from the Division of Onsite Wastewater, construction of the experimental system can start. The District/County staff and the Program Specialist will observe the installation of the experimental system. The District Environmentalist will forward a copy of the completed IOWDS Approval Form to the Division of Onsite Wastewater when final approval has been granted to the installation.
7. Repairs or modification to an approved experimental system must be recorded and reported to the Division of Onsite Wastewater by the manufacturer.
8. The Division of Onsite Wastewater will maintain a separate filing system and data base to track experimental system installations.
9. The Division of Onsite Wastewater will maintain records on all approved experimental system installations. The Division of Onsite Wastewater will design and implement a monitoring and testing procedure for each approved experimental system. Upon completion of the monitoring and testing period, the Division of Onsite Wastewater will issue a final disposition on the status of the experimental system. This will consist of denial or approval as an alternative onsite wastewater disposal system for statewide use.

2.19 CERTIFICATION FOR INSTALLERS OF INDIVIDUAL ONSITE WASTEWATER DISPOSAL SYSTEMS (IOWDS)

1. Certification Required

- a. No person shall be engaged in the business of constructing onsite sewage/wastewater treatment and disposal systems in Mississippi without first applying for and receiving a certification, as herein required by the Department.
However, an individual may install a system on his/her own property and a professional engineer may operate as an installer without being certified [Section 41-67-25 (1), Mississippi Code of 1972, Annotated]
- b. Certification applications, on forms approved by the Department, shall be submitted to the Division of Onsite Wastewater. A certification fee shall be charged in the amount of \$50.00 per year.
- c. The certification shall be valid statewide.

2. Certification of Installers

- a. Every installer shall attend a basic certification course approved by the MSDH which includes training on the Wastewater Law, the MSDH Regulation Governing Individual Onsite Wastewater Disposal Systems, soil/site evaluations, design, installation and construction criteria for individual onsite wastewater disposal systems.
- b. The installer shall complete and pass an examination for certification. An option shall be provided for either a written or an oral test. A passing score for the test shall be 70%; provided a re-examination is permitted if the initial score is below 70%.
- c. Provides proof of having a valid public liability insurance policy in effect with liability limits of at least Fifty Thousand Dollars (\$50,000.00) per occurrence and at least One Hundred Thousand Dollars (\$100,000.00) in total aggregate amount.
- d. The Department may initiate levels of certification for the installation of specific types of onsite wastewater systems. This certification may include training and testing above the basic level of certification.

3. Re-Certification

- a. The installer's certification is valid for one year. The certification may be renewed annually provided:
 - i. There is no outstanding fine owed.
 - ii. The applicant submits proof of attendance at a minimum of three hours of continuing education in wastewater disposal, approved by the MSDH, in the last 12 months for each re-certification thereafter.
 - iii. Provides proof of having a valid public liability insurance policy in effect with liability limits of at least Fifty Thousand Dollars (\$50,000.00) per occurrence and at least One Hundred Thousand Dollars (\$100,000.00) in total aggregate amount.
 - iv. The applicant pays a \$50.00 fee.

4. Responsibilities of The Certified Installer (See also Section 2.5, 9, a, c & d)

- a. It shall be the responsibility of the installer to install wastewater disposal systems in accordance with applicable State Laws and Regulations.
- b. The certified installer, who designs or installs the system, shall sign and file with the county health department an affidavit that he/she constructed the system in compliance with all requirements and regulations applicable to that type of system. The affidavit and layout drawings for all systems installed must be submitted to the county health department.
- c. Each certified installer shall furnish proof of certification to a property owner, the owner's representative, or occupant of the property on which an individual onsite wastewater disposal system is to be designed, constructed, repaired or installed by such installer and if requested by the Department or its Authorized Agent.
- d. If the Department has been requested to approve the design, construction or installation of an onsite wastewater disposal system, a certified installer may not begin the construction or installation of such system unless he/she notifies the Department of the date on which the installer plans to begin work on the system. This notification shall be given a minimum of 48 hours before the system is to be installed.

5. Administrative Fine

- a. The certified installer shall be subject to an administrative fine of \$1,000 if such installer or engineer fails to comply with all construction requirements and regulations applicable to the type of IOWDS he/she installed. Any failure to comply with the provisions of this Regulation or construction requirements relating to the IOWDS installed shall be documented with sufficient proof.
- b. Prior to assessing and collecting the administrative fine, the Public Health District shall provide written notification by Certified Mail/Return Receipt Requested to the licensee, stating the basis for the fine, and setting an administrative hearing date at the district level within 5-20 days of mailing of such notification.
- c. Upon determination at a district hearing of sufficient reason for the fine to be assessed, the installer shall have ten days from receipt of such determination

to request an additional hearing at the state level, if he wishes to appeal the decision of the district hearing officer.

- d. At the State level, a hearing officer appointed by the State Health Officer shall conduct a hearing to be scheduled within 30 calendar days of receipt of the request for such hearing.

6. **Hearing Procedures**

- a. The state level hearing shall be held at the Mississippi State Department of Health, Felix J. Underwood Building, 2423 North State Street, Jackson, Mississippi. The appellant will be provided procedural rules.
- b. The decision to be made by the State Health Officer will be based solely on the oral, written and documentary evidence presented. After considering all findings of fact, conclusions of law and recommendations of the hearing officer, the State Health Officer will make the final decision whether to sustain the decision made by the district hearing official and assess and collect the fine. The decision of the State Health Officer will be binding on the Public Health District. The appellant will be notified in writing by certified mail of the State Health Officer's decision.
- c. In case of an adverse decision the appellant will be advised of the right to pursue judicial review.
- d. No individual may file a petition for judicial review with a court of competent jurisdiction until a final written decision and order have been provided by the Mississippi State Department of Health.

7. **Suspension/Revocation of Certification**

- a. Any installer or his/her employee(s) constructing an onsite wastewater treatment and disposal system (IOWDS) in violation of State Laws, Regulations and Standards shall be subject to suspension of certification and to penalties, as defined in **Section 41-3-59, Mississippi Code of 1972**. Repeat violations shall constitute grounds for revocation of certification. The interference by a certified installer or his/her employee(s) with the Health Authority in performance of his/her duties with respect to this Regulation shall constitute grounds for revocation of certification. The suspension/revocation may be in addition to the \$1,000 dollar fine in **Section 41-67-6(5)**. A suspension/revocation is effective statewide.
- b. Any installer whose certification is revoked shall be eligible to apply for a new certification no sooner than six months from the date of revocation.

Any person whose certification previously has been revoked and who obtains a subsequent certification and violates the provisions of the Regulation, which results in the revocation of his/her certification for the second time, shall not be granted another certification.

- c. Prior to suspension/revocation, the issuing official shall provide written notification to the certified installer, stating the basis for suspension or revocation, and advising the certification shall be suspended or revoked on the tenth day following the mailing of the written notification, unless a written request for a hearing is filed with the issuing official, by the certified installer, within the ten day period.
- d. A hearing shall be scheduled within the Public Health District not more than ten days after the request for hearing has been filed. The decision of the hearing officer and reasons for the decision shall be forwarded to the appellant by certified mail.
- e. A certification may be summarily suspended by the issuing official pending a hearing, as herein provided, if the holder of the certification acts in such a manner as to pose an immediate or serious threat to the public health. In the case of a summary suspension, the certified installer shall be given a hearing as soon as possible after the issuing official receives a written request for a hearing.

2.20 LICENSURE FOR PERSONS ENGAGED IN THE BUSINESS OR PRACTICE OF REMOVING AND DISPOSING OF THE SLUDGE AND LIQUID WASTE (SEPTAGE) FROM INDIVIDUAL ONSITE WASTEWATER DISPOSAL SYSTEMS

1. License Required

- a. On and after January 1, 1988, no person shall be engaged in the business of removing and disposing of the sludge and liquid waste (septage) from individual onsite wastewater disposal systems without first applying for and receiving a license as herein required by the Mississippi State Department of Health.
- b. License applications, on forms approved by the Mississippi State Department of Health, shall be submitted in the Public Health District in which the contractor's (sewage pumper's) business is based. A license fee (**Section 41-67-12 (1)(b), Mississippi Code 1972**) shall be charged, each business entity, in the amount of \$50.00 per year, except for any sewage pumper who shall show proof that he was in the septage business in Mississippi prior to July 1, 1987.

- c. The license shall be issued annually upon a satisfactory inspection of his/her pumping and hauling equipment, approval of his/her disposal site and receipt of fee, if required.
- d. The license shall be valid on a reciprocal basis in any other designated Public Health District where the contractor engages in removing and disposing of sludge and liquid waste from individual onsite wastewater disposal systems.

2. Vehicles and Equipment

- a. All vehicles engaged in septage removal or hauling shall carry the name and address of the contractor and the license number on both sides of the vehicle.
- b. All such equipment used shall be capable of delivering the septage to its intended destination without spillage or loss of septage while en route.
- c. Spillage or dumping of septage at any site other than those authorized by the Department of Environmental Quality, Office of Pollution Control constitutes grounds for suspension or revocation of license.

3. Disposal

- a. All septage shall be disposed of in a manner consistent with regulations promulgated by the Mississippi State Board of Health and the Commission on Environmental Quality.
- b. Such disposal methods include the authorized discharge of the septage into a waste treatment facility permitted by the Department of Environmental Quality, Office of Pollution Control. At the time of initial application or re-licensure, written permission shall be submitted from the proper official when waste is to be disposed of into a public or community wastewater treatment facility. At the time of re-licensure, a current written permission shall be submitted.
- c. If disposal is proposed by any other means, approval of the method and location shall be obtained from the Department of Environment Quality, prior to receiving a license.

4. **Suspension/revocation of License**

- a. Any person engaged in the business of removing and disposing of the sludge and liquid waste from individual onsite wastewater disposal systems in violation of State Laws, Regulations and Standards shall be subject to suspension of license and to penalties defined in **Section 41-3-59, of the Mississippi Code of 1972.**
- b. Repeat violations shall constitute grounds for revocation of license. The interference of a licensee or his/her employee(s) with the Health Authority in performance of his/her duties with respect to this Regulation shall constitute grounds for revocation of license.
- c. Any person whose license is revoked shall be eligible to apply for a new license no sooner than six months from the date of revocation. Any person whose license previously has been revoked and who obtains a subsequent license and violates the provisions of the Regulation, which results in the revocation of his/her license for the second time, shall not be granted another license.
- d. Prior to such action, the issuing official shall provide written notification to the licensee, stating the basis for suspension or revocation, and advising the licensee that the license shall be suspended or revoked on the tenth day following the mailing of the written notification, unless a written request for a hearing is filed with the issuing official, by the licensee, within the ten day period.
- e. A hearing shall be scheduled within the Public Health District not more than ten days after the request for hearing has been filed. The decision of the hearing officer and reasons for the decision shall be forwarded to the appellant by certified mail.
- f. A license may be summarily suspended by the issuing official pending a hearing, as herein provided, if the holder of the license acts in such a manner as to pose an immediate or serious threat to the public health. In the case of a summary suspension, the licensee shall be given a hearing as soon as possible after the issuing official receives a written request for a hearing.

2.21 REGISTRATION OF MANUFACTURERS

1. Each manufacturer of an individual on-site wastewater disposal system (including but not limited to aerobic treatment plants, septic tanks, subsurface drip irrigation systems, alternative technology and systems under experimental protocol) shall hold a valid registration issued by the State Department of Health in order to operate a business in or do business in the State of Mississippi.
2. Each manufacturer must submit the following to the department:
 - a. Information including specifications of each system and/or component part of the system as deemed necessary by the Department for review.
 - b. \$100 annual registration fee.
3. After receipt of the fee and required information, the department shall evaluate the documentation for compliance with the minimum standards set forth in Regulation. Upon verification that the system is in compliance with these standards the Department shall issue a certificate of registration when the following additional requirements are met:
 - a. Aerobic treatment plants - documentation, from a third party certifier accredited by the American National Standards Institute, that the manufacturer's product has successfully completed the testing and listing process.
 - b. On or before October 1, 1996 each manufacturer not currently tested and listed by a third party certifier, accredited by the American National Standards Institute, shall submit to the department evidence that such manufacturer has commenced the testing/listing process. Within nine (9) months after the submission of such evidence, each manufacturer must have completed the testing/listing process.

Each manufacturer must have established procedures which send representatives to a minimum of ten percent of its distributors in Mississippi on an annual basis to conduct evaluations to assure the distributor of certified aerobic treatment systems is providing proper maintenance, has sufficient replacement parts available and is maintaining service records. Annual monitoring reports, from the manufacturer and third party certifier must be submitted to the Department prior to re-registration.

- c. Septic tanks - The Department shall review, including an on-site inspection if deemed necessary, the plans, specifications, and construction criteria and shall determine them to be in compliance with the regulation.
- d. Subsurface Drip irrigation systems - The Department shall review, including an on-site inspection if deemed necessary, the plans, specifications and construction criteria and shall determine them to be in compliance with the regulation.
- e. Spray Irrigation Systems - The Department shall review equipment intended to be utilized in the construction of spray irrigation systems to verify compliance with the regulation.
- f. Alternative Wastewater Technology - All alternative wastewater treatment and/or disposal systems/products must be documented and reviewed by the Division of Onsite Wastewater to verify compliance with the applicable standards.
- g. Systems under experimental protocol - Such systems shall comply with requirements of **Section 2.17** of this Regulation.

2.22 REQUIREMENTS FOR THIRD PARTY CERTIFIERS

- 1. Aerobic treatment systems may be installed only if they have been tested and listed by a third party certifying program. Such aerobic treatment systems shall be in compliance with standards for Class I systems as defined by the most current revision of American National Standards Institute/National Sanitation Foundation (ANSI/NSF) International Standard Number 40, hereby incorporated by reference. An approved third party certifying program shall comply with the following provisions in order for systems which it has certified to be installed in Mississippi:
 - a. On and after October 1, 1996 an approved third party certifying program shall be accredited by the American National Standards Institute (ANSI).
 - b. Have established procedures which send representatives to a minimum of one distributor of each manufacturer in Mississippi on an annual basis to conduct evaluations to assure the distributor of certified aerobic treatment systems is providing proper maintenance, has sufficient replacement parts available and is maintaining service records.
 - c. Notify the department of the results of monitoring visits to manufacturers and distributors within sixty (60) days of the conclusion of the monitoring.

- d. Submit completion reports on testing and evaluation of each aerobic treatment system verifying compliance with ANSI/NSF STANDARD 40. Such reports shall include but not be limited to the following:
 - i. Materials
 - ii. Design and construction
 - iii. Performance requirement (BOD, SS, pH)
 - iv. Operation and maintenance
- e. The third party certifying entity must be disassociated with and have no vested interest in the manufacturer to which certification services are provided.

2.23 HEARINGS AND APPEALS

- 1. Any person who has been denied an approval or whose property has been declared unsuitable for recommendation of any wastewater disposal system or who has been charged with a violation of this regulation can request a district level hearing in writing within 10 days of notification of the denial or violation. A hearing will be scheduled within 10 calendar days after the request has been filed. The appellant will be notified in writing of the decision of the District Hearing Officer.
- 2. The appellant shall have the right to appeal an unfavorable decision to the State Health Officer in writing within 10 days of notification of results of the district-level hearing. A hearing will be scheduled within 30 calendar days after the request has been filed. The decision of the State Health Officer or his/her designee as Hearing Officer will be based solely on the oral, written and documentary evidence presented. The appellant will be notified in writing of the decision.
- 3. No individual may file a petition for judicial review with a court of competent jurisdiction until a final written decision and order have been issued.

2.24 EXCEPTIONS, EXEMPTIONS, AND VARIANCES

- 1. The State Health Officer may grant, extend, deny, or revoke any exception or exemption where such action will not subject the public to unreasonable health risks or jeopardize environmental resources.

2. A variance may be requested, by the property owner, only after the results of a soil/site evaluation has determined a design-based IOWDS that conforms to the regulation cannot be recommended for installation.
 - a. The State Health Officer may grant a variance if a thorough investigation reveals that strict application of the Regulation would cause the applicant undue hardship which results from conditions peculiar to the site or situation under consideration, which conditions could not reasonably have been anticipated in the writing of the Regulation. Further, the granting of such a variance shall not subject the public to unreasonable health risks or jeopardize environmental resources.
 - b. A request for a variance from the Regulation must be submitted, by the District Supervising environmentalist, in writing with supporting documentation. This documentation shall include:
 - i. The written request for variance from the property owner.
 - ii. The complete file: soil/site evaluation, plot plan, any field notes etc...
 - iii. A follow-up site evaluation made by the District Environmentalist and the Program Specialist to confirm the original soil/site evaluation to be correct and that no approvable systems can be installed in compliance with the regulation.
 - iv. A system recommendation, from the District Environmentalist and Program Specialist, that could be installed with a variance.
 - v. A detailed dimensioned drawing of the lot, indicating the recommended system location, any wells, the house and other related information.
 - vi. If no system can be recommended for variance, documentation supporting this determination along with the complete file to this office for review.
 - c. The State Health Officer may revoke any request for variance.
 - d. A variance, if granted, is not transferable from one person to another or from one site to another.

2.25 RESEARCH PROJECTS

The Department may initiate research projects and may consider projects if submitted by registered professional engineers and/or professional soil scientists. The purpose of these projects shall be to determine the feasibility of new technology, new design criteria and/or alteration of existing design criteria for IOWDS.

2.26 PENALTY FOR VIOLATION OF REGULATIONS

The violation of this Regulation is a misdemeanor under Section 41-3-59 and 41-67-28 Mississippi Code of 1972, Annotated, and is punishable by fine in the amount stated therein.

2.27 UNCONSTITUTIONALITY CLAUSE

Should any paragraph, item, sentence, clause, or phrase of this Regulation be declared unconstitutional or invalid for any reason, the remainder of this Regulation shall not be affected thereby.

CERTIFICATION OF REGULATION

This is to certify that the above **REGULATION GOVERNING INDIVIDUAL ONSITE WASTEWATER DISPOSAL SYSTEMS** was adopted by the Mississippi State Board of Health on **July 10, 1996** to become effective **August 10, 1996**.

Amended July, 2001

Section 2.18 Certification for Installers of Individual Onsite Wastewater Disposal Systems (IOWDS)

2. Certification of Installers

- c. Provides proof of having a valid public liability insurance policy in effect with liability limits of at least Fifty Thousand Dollars (\$50,000.00) per occurrence and at least One Hundred Thousand Dollars (\$100,000.00) in total aggregate amount.

3. Re-Certification

- iii. Provides proof of having a valid public liability insurance policy in effect with liability limits of at least Fifty Thousand Dollars (\$50,000.00) per occurrence and at least One Hundred Thousand Dollars (\$100,000.00) in total aggregate amount.

Amended October, 2001

Section 2.5 Responsibilities

8. If the property is to be subdivided, the subdivider shall be responsible for the following:

- a. Furnishing a legal description and site plan of the entire area to be developed. The site plan shall show lot lines, lot sizes (dimensions and total area), and existing ground contours on two foot intervals. The site plan shall show all lakes, ponds, streams and any known or possible wetland areas. Names of adjacent property owners and their property lines abutting the proposed development shall be shown. Property adjoining the proposed subdivision of which the subdivider holds legal title must also be shown with a letter of intention concerning this property.

Amended July, 2003

2.5 Responsibilities

7. The County Environmentalist shall be responsible for the following:

- e. If the soil/site evaluation indicates no design based system can be recommended, the department shall state in writing the reasons for the disapproval and inform the applicant that he/she has the option to employ an engineer to design an onsite wastewater system for the site.
8. **If the property is to be subdivided, the subdivider shall be responsible for the following:**
- b. When residential subdivisions are proposed which are composed of fewer than thirty-five (35) lots, and no system of sanitary sewers is available to which collection sewers may be feasibly connected, the State Health Officer may waive the requirement for a feasibility study. Such waiver of the feasibility study will not be granted if the proposed development meets any one of the following criteria:
 - i. Is within a wastewater utility district where that utility has certified it will provide sewer service
 - ii. Is within a regional wastewater authority that has certified it will provide sewer service
 - iii. Is within one mile of a city with sewer availability that has certified it will provide sewer service
 - iv. MSDH analysis reflects that soil and site conditions may not be conducive for Individual Onsite Wastewater Disposal Systems.

2.6 Procedures for Intent to Install and System Recommendations

- 9. The department must approve or disapprove the request, for site evaluation, within fifteen (15) working days following submission of all required documentation. If the department disapproves the request, the department shall state in writing the reasons for the disapproval. If the department does not respond to the request within fifteen (15) working days, the request for approval of an individual on-site wastewater disposal system shall be deemed approved.

2.23 Exceptions, Exemptions and Variances

- 1. The State Health Officer may grant, extend, deny, or revoke any exception or exemption where such action will not subject the public to unreasonable health risks or jeopardize environmental resources.

Amended April, 2004

2.5 Responsibilities

10. The Professional Engineer shall be responsible for the following:

- c. Providing, for Department review and comment, appropriate documentation to include but not limited to soil/site evaluation, plot plan with legal description and a detailed set of plans and specifications for the design and construction of said proposed system bearing the registered engineer's seal on all systems.
- d. Providing an approvable design modification for any submitted design where deficiencies with law or regulation were identified by the Department.
- f. Signing and filing with the local county health department a letter of completion, bearing the registered engineer's seal, stating the system was installed in compliance with the approved design plans and an affidavit by the installer stating the system was installed according to the engineer's design and specifications for all systems he/she has designed, constructed or installed.

Secretary and Executive Officer

In addition Design Standards were adopted into the Regulation as follows:

Design Standard I	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .
Design Standard II	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .
Design Standard III	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .
Design Standard IV	Adopted by the Mississippi State Board of Health on July 10, 1995 to become effective August 10, 1995 .
Design Standard V	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .
Design Standard VI	Adopted by the Mississippi State Board of Health on April 9, 1997 to become effective May 12, 1997 .
Design Standard VII	Adopted by the Mississippi State Board of Health on April 9, 1997 to become effective May 12, 1997 .
Design Standard VIII	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .
Design Standard IX	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .
Design Standard X	Adopted by the Mississippi State Board of Health on April 9, 1997 to become effective May 12, 1997 .
Design Standard XI	Adopted by the Mississippi State Board of Health on April 9, 1997 to become effective May 12, 1997 .
Design Standard XII	Adopted by the Mississippi State Board of Health on April 9, 1997 to become effective May 12, 1997 .
Design Standard XIII	Adopted by the Mississippi State Board of Health on January 8, 1997 to become effective February 17, 1997 .